development is at present beyond our reach," and again: "But when all these admissions are made, and when the conserving action of natural selection is in the fullest degree recognized, we cannot close our eyes to two facts: first, that we are utterly ignorant of the manner in which the ideoplasm of the germ-cell can so respond to the play of physical forces upon it as to call forth an adaptive variation; and second, that the study of the cell has on the whole seemed to widen rather than to narrow the enormous gap that separates even the lowest forms of life from the inorganic world" (p. 330). H. S. W.

15. *Tables for the Determination of Minerals by Physical Properties, ascertainable with the aid of a few Field Instruments.* Based on the System of Prof. Dr. Albin Weisbach, by PERSIFOR FRAZER, 163 pp. 1897 (J. P. Lippincott Co.).—The fourth edition of the Weisbach tables prepared by Prof. Frazer has recently been issued. A large amount of new material has been added and the tables have been adapted in other respects so as to make them even more useful than before to the student. These tables are now too well and favorably known to need more than this brief notice.

16. *Der Lichtsinn augenloser Tiere von* WILIBALD A. NAGEL. 8vo. 120 pp. Jena, 1896 (Gustav Fischer).—This memoir discusses at length the function of sight in eyeless animals. It begins with a lecture on the apparent paradox of "seeing without eyes." This is followed by an account of the author's interesting experiments showing that many animals are still sensitive to light and distinguish the direction from which it comes after the removal of the eyes. The concluding part discusses the theories of vision and perception of light in the lower animals.

17. *Additional information concerning the giant Cephalopod of Florida;* by A. E. VERRILL.—After the publication of the notice in the January number of this Journal, I received additional facts concerning this huge creature from Dr. Webb. He has also sent me photographs,* taken two days after it came ashore, giving four different views of it.

These photographs show that it is an eight-armed cephalopod, and probably a true *Octopus*, of colossal size. Its body is pear-shaped, largest near the broadly rounded posterior end. The head is scarcely recognizable, owing to mutilation and decay. Dr. Webb writes that a few days after the photographs were taken (Dec. 7th), excavations were made in the sand and the stump of an arm was found, still attached, 36 feet long and 10 inches in diameter where it was broken off distally.

This probably represents less than half of their original length, as the arms of *Octopus* generally taper very gradually and are often five or six times longer than the body. What looks like the remains of the stumps of arms is shown in the front view.†

* These were taken by Mr. Edgar Van Horn and Mr. Ernest Howatt, to whom my thanks are due for the proofs.

† I have had drawings made from the photographs of the front view and side-

The length, given as 18 feet, includes the mutilated head region. The photographs show that the "breadth," given in the first account as 10 feet, applies to the more or less divergent stumps of the arms (?) and the body taken together, as they lie on the sand. The body, itself, is almost 7 feet wide, and rises at its thickest part $3\frac{1}{2}$ feet above the sand in which it is partially imbedded. The body is not greatly flattened and probably had a diameter of at least 5 feet when living. The parts cast ashore probably weighed at least 6 or 7 tons, and this is doubtless less than half of its total mass when living.

This species is probably one of those upon which the sperm whale feeds regularly on the whaling grounds off our southern coast.

Whalers have told me, years ago, that sperm whales killed in that region often vomit great masses of cephalopod flesh, including sections of huge arms. One reliable whaling captain used to say that he had seen very large suckers "as large as a dinner plate" on such fragments of arms. The suckers of this Florida *Octopus* would have been as large as that, if they had the proportions to the arms and body usual in small species of *Octopus.*

This species is evidently distinct from all known forms, and I therefore propose to name it *Octopus giganteus.* It is possible that it may be related to *Cirroteuthis,* and in that case the two posterior stumps, looking like arms, may be the remains of the lateral fins, for they seem to be too far back for the arms, unless pulled out of position. On the other hand, they seem to be too far forward for fins. So that they are probably arms twisted out of their true position. This is, at any rate, the first gigantic Octopod that has been described or figured from actual specimens.

Note. Since the above was in type, I have learned that Dr. Webb had caused the sand around the monster to be removed, and by means of six horses and powerful tackle he has moved it higher up the beach. He says that the true length of the body is 21 feet. The head is mostly or entirely gone. The outer integument has dried to a firm mass several inches thick.

view, which will be published in the American Naturalist. The photographs themselves are not strong enough for reproduction, having been over-exposed.

A notice of this *Octopus,* written by me, was published in the New York Herald, Jan. 3d, but my signature was omitted without my consent. A figure, furnished and described by me as a restoration, was inserted without any explanation: it is needless to say that it does not closely resemble the mutilated remains.